

May 15, 2017

Louis Howard
ADEC-Division of Spill Prevention and Response
555 Cordova Street
2nd Floor
Anchorage, AK 99501-2617

Subject: Little Port Walter – Fuel Line Snag Report

Dear Mr. Howard:

Ahtna Environmental, Inc. (Ahtna) was onsite at Little Port Walter from Saturday, May 6, 2017 until Tuesday, May 9, 2017 to conduct an Environmental Liabilities Evaluation. On Sunday, May 7, 2017 while investigating a potential past fuel line spill near the generator shed and bulk fuel tanks, Ahtna snagged the current fuel line with the NOAA supplied CASE excavator. Immediately after the event, Ahtna worked with NOAA to shut off the valve and prevent additional fuel loss, and use absorbent pads to capture as much fuel as possible. It is estimated that less than 1/10 of a gallon of diesel was released. Ahtna then excavated approximately 7-cubic feet of material beneath the leak down to bedrock to remove any contaminated soil. The material is secured in a fish box wrapped in plastic and is currently stored onsite for future offsite disposal. The fuel line was repaired and the area backfilled. Onsite NOAA personnel were notified of the incident and inspected the repair. Additional details are presented in the remainder of this project.

Geology/Hydrology

The weather conditions on Sunday, May 7, 2017 were overcast with a continual moderate to heavy rainfall throughout the day. In support of the construction of the generator shed, the hill in the immediate vicinity was excavated after blasting to bedrock and the gravel used to level the area for the generator shed and bulk fuel tank storage area (Attachment 1, Figure 1). There is no soil between the bedrock and the gravel layer. Groundwater flows just below the gravel, 12-24-inches, along the surface of the bedrock from uphill (north) to downhill (south).

Utility Locate Procedure

Figures provided by NOAA were reviewed for potential locations of soil contamination and to support utility locate information (Attachment 2). After arriving onsite via charter plane, Ahtna walked the entire site with NOAA field/maintenance staff locating all known utilities. The approximate locations of electrical, telecommunication, and fuel lines were noted by Ahtna before any field work commenced. The majority of utility lines are running within or alongside the gravel trails/paths throughout the site. The electrical panels were located within each structure and fuel line entrance/exist points were also noted (Attachment 1, Figure 2).

During the petroleum soil investigation, each structure's fuel tank and the entrance of the fuel line into the structures were located and inspected. The electrical panels within the structure were also located along with the approximate utility line locations provided by the onsite NOAA staff. The "snag" of the fuel line happened at the third structure of the day (area between workshops and generator shed), and the eighth (8th) overall excavated area (Attachment 1, Figure 5).

Fuel Line Snag

Ahtna and NOAA's representatives conducted a tailgate health and safety meeting each morning prior to starting work activities. Topics discussed on Sunday included heavy equipment inspection checklist, safely working around heavy equipment, locating utilities and fuel lines, slip/trips/falls, potentially contaminated soil and water, and adverse weather conditions.

While excavating at the edge of the gravel roadway near the bulk fuel tanks, the tooth of the excavator caught the 1-inch interior diameter double walled diesel fuel line running to the generator shed. This took place approximately 22-feet north of the fuel tank outlets (Attachment 1, Figure 4). The spotter was able to signal the operator to stop prior to fully severing the line. The spotter inspected the kinked fuel line and determined it did not breach. The operator immediately followed the fuel line to the bulk fuel tanks and noticed a small leak (1-cm) in the flex fitting attaching the fuel line to the structure. The spotter was unable to see the leak because they were on the opposite side of the excavator bucket. The operator used his glove to reduce the flow of the leak. The kink of the fuel line occurred at 40-48-inches from the concrete pad (bulk fuel tank area). The fuel line was believed to run in the more direct path to the far NE corner of the generator shed.

Ahtna used a nearby snow shovel and placed it below the leak to collect any leaking fuel. Ahtna notified NOAA staff immediately and Ahtna used the spill kit (75 yards away) to absorb as much escaped fuel as possible while the NOAA staff shut off the inside valve from the fuel tank. Later the generator valve on the fuel line was closed creating a vacuum to trap the existing fuel inside the line.

After the release of additional fuel loss was eliminated, Ahtna used an empty wheelbarrow, two 5 gallon buckets, and shovels of varying blade widths to excavate the material and groundwater directly below the small leak. The material (gravel) was excavated straight down to bedrock, north (direction of groundwater flow) to bedrock, and south (direction towards generator shed, upstream) 2-feet. All excavated material was collected in the buckets and then placed in a wheel barrow. This excavated material was subsequently mixed/aired out to help release any volatiles.

The following day (Monday, May 8, 2017), the excavated material stored in the wheelbarrow was moved into a sealed fish box and secured with plastic. Both areas of the fuel line (kink and dripping flexible coupler) were re-inspected. The flexible coupler was removed and fuel was noticed inside the pipe within two inches of its top. This pipe was disconnected and drained an additional 3-feet back into the line with a rubber transfer hose, a snug metal plug was double hose clamped to the open end, and the entire array was suspended several feet higher than its previous location. A cap was also installed on the fuel take side. No diesel was observed in either of these procedures. The as-left conditions/repairs were shown to NOAA onsite maintenance staff (Attachment 1, Figures 9-12).

Ahtna offered to uncover the fuel line for future repairs before departure; this was declined due to potential safety trip hazards and weather considerations. Ahtna has staged the excavated material onsite and will incorporate it into future remediation work for eventual proper disposal. There were no replacement parts on hand and due to the remote location of the site, Ahtna is working with NOAA to purchase and ship replacement fuel line and parts associated with the leak to the site.

Due to the circumstances and potential hazards associated with the snag of the double walled fuel line, Ahtna implemented immediate measures to stop the leak, excavate contaminated material, and repair the impacted fuel supply system without direction by NOAA. The repair was inspected by NOAA who also provided a secure location for storing the impacted material for future disposal. Requesting parts in remote Alaska was not believed to be uncustomary. All actions were performed by Ahtna with the intent of doing the right and professional thing.

Attachment 1 shows additional detail photos associated with the snag and its repair.

Fuel Loss/Removed Material

The exterior pipe along the bulk fuel tank structure has a 1.5-inch exterior diameter pipe with a 1-inch interior diameter. There was up to 10 seconds of unobstructed fuel leak before a gloved hand was placed over the leak to reduce flow. Approximately 3-feet of vertical pipe lost fuel, it is anticipated that no more than 1/10 gallon of diesel fuel was released. Most of this fuel was contained. Approximately 7-cubic feet of material was removed.

Sample Collection

On Sunday, May 7, 2017, after the fuel line had been secured and excavated material safely stored, Ahtna's Environmental Sampler collected one sample from the excavated western sidewall [LPW17-SL-GSP-W-01]. The following day, Monday, May 8, 2017, Ahtna's Environmental Sampler collected an additional 3 samples from the vicinity of the leak (Attachment 3).

- LPW17-SL-GSP-leak01 was collected 2-feet west of the excavated material;
- LPW17-SL-GSP-leak02 was collected 3-feet north (upstream) of the excavated material; and
- LPW17-SL-GSP-leak03 was collected 2 feet south (downstream) of the excavated material.

Discoveries/Conclusions

The generator shed and bulk fuel tanks are built on approximately 1-2 feet of imported gravel placed directly on top of bedrock. The depth of gravel is dependent upon leveling of the bedrock in order to construct the structures. The utilities do not go in a straight line, instead they follow the curvature/depth of bedrock. Ahtna made every effort to clean up the unfortunate situation prior to leaving the site, and is still in communication with onsite NOAA staff to rectify the situation.

Sincerely,

Ahtna Environmental, Inc.

Vivian Tokar
Project Manager

Kathryn Cleveland
Assistant Project Manager

Attachments:

1. Photographic Log
2. NOAA Figure
3. Sample Locations

ATTACHMENT 1
PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG



Figure 1. Workshop and generator shed area: Blasted bedrock to build structures.

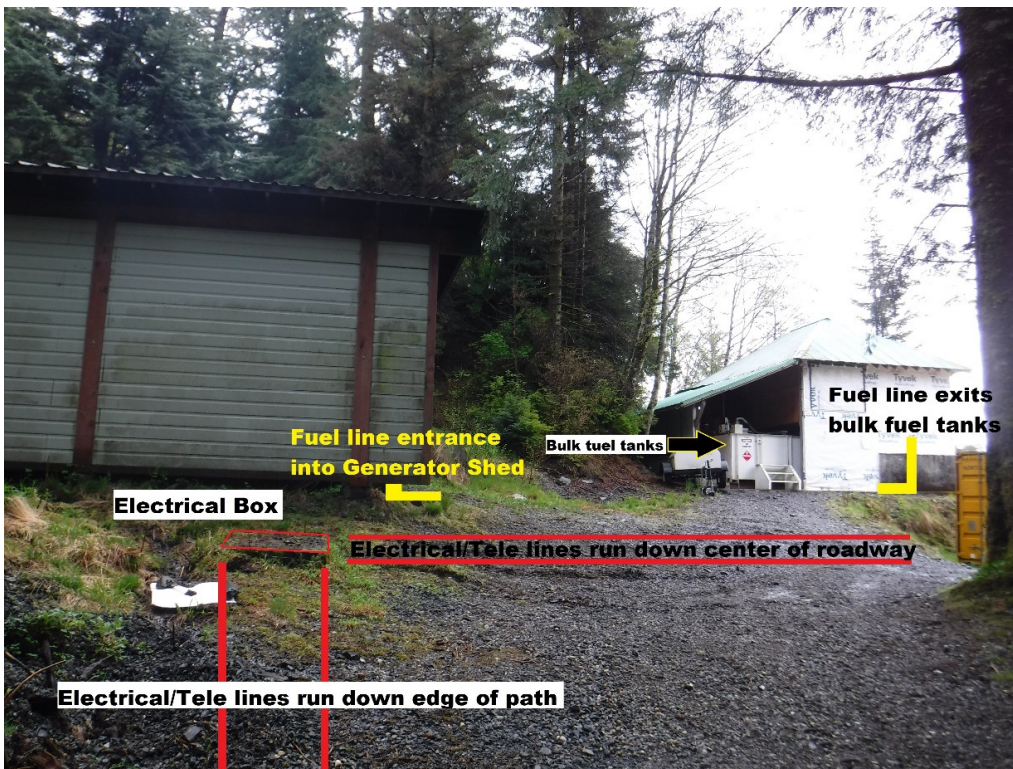


Figure 2. Workshop and generator shed area: Utility locations.



Figure 3. Workshop and generator shed area: Ahtna operator and spotter.



Figure 4. Workshop and generator shed area: Location of kink and leak.



Figure 5. Workshop and generator shed area: Kinked fuel line.

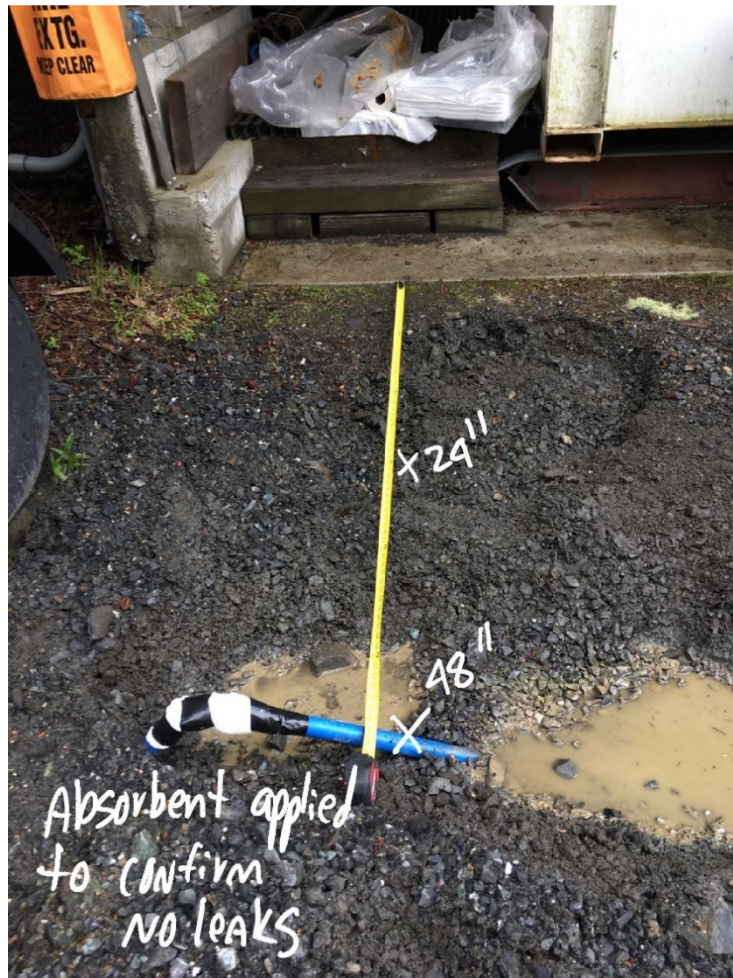


Figure 6. Workshop and generator shed area: Location of kinked fuel line.



Figure 7. Workshop and generator shed area: Location of leak.



Figure 8. Workshop and generator shed area: Flex fitting leak.



Figure 9. Workshop and generator shed area: Removed material.



Figure 10. Workshop and generator shed area: Removed material to bedrock.



Figure 9. Workshop and generator shed area: Ahtna repairs.



Figure 10. Workshop and generator shed area: Ahtna repairs.



Figure 11. Workshop and generator shed area: Ahtna repairs.



Figure 12. Workshop and generator shed area: Ahtna repairs to both locations.



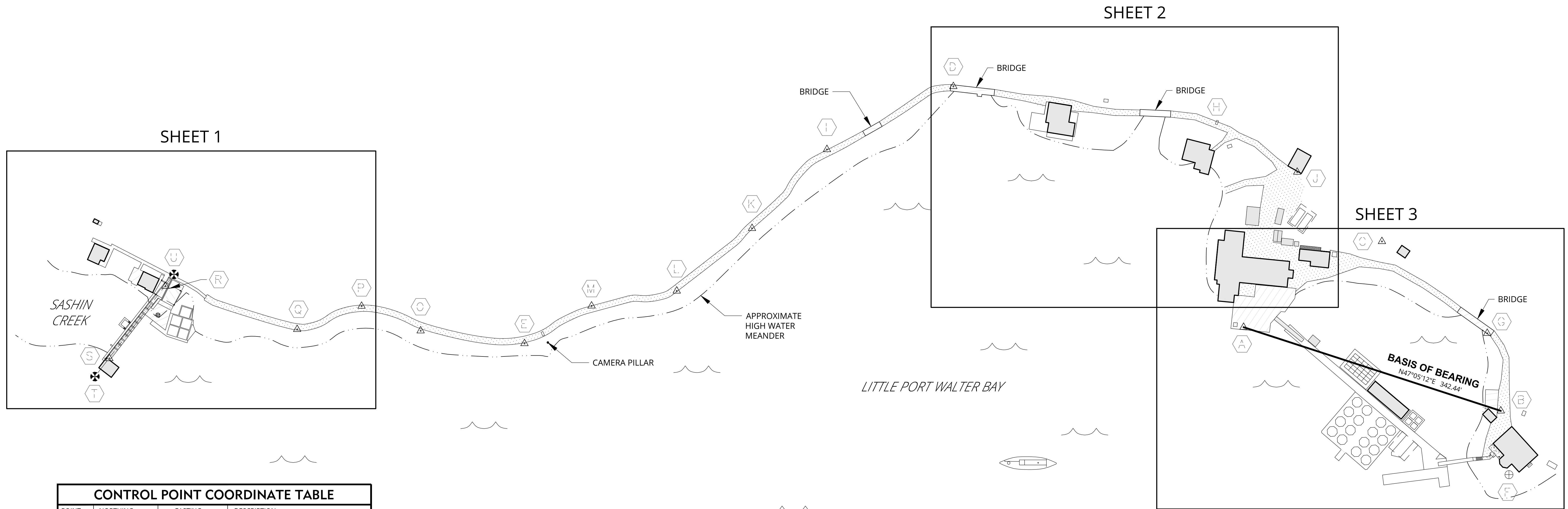
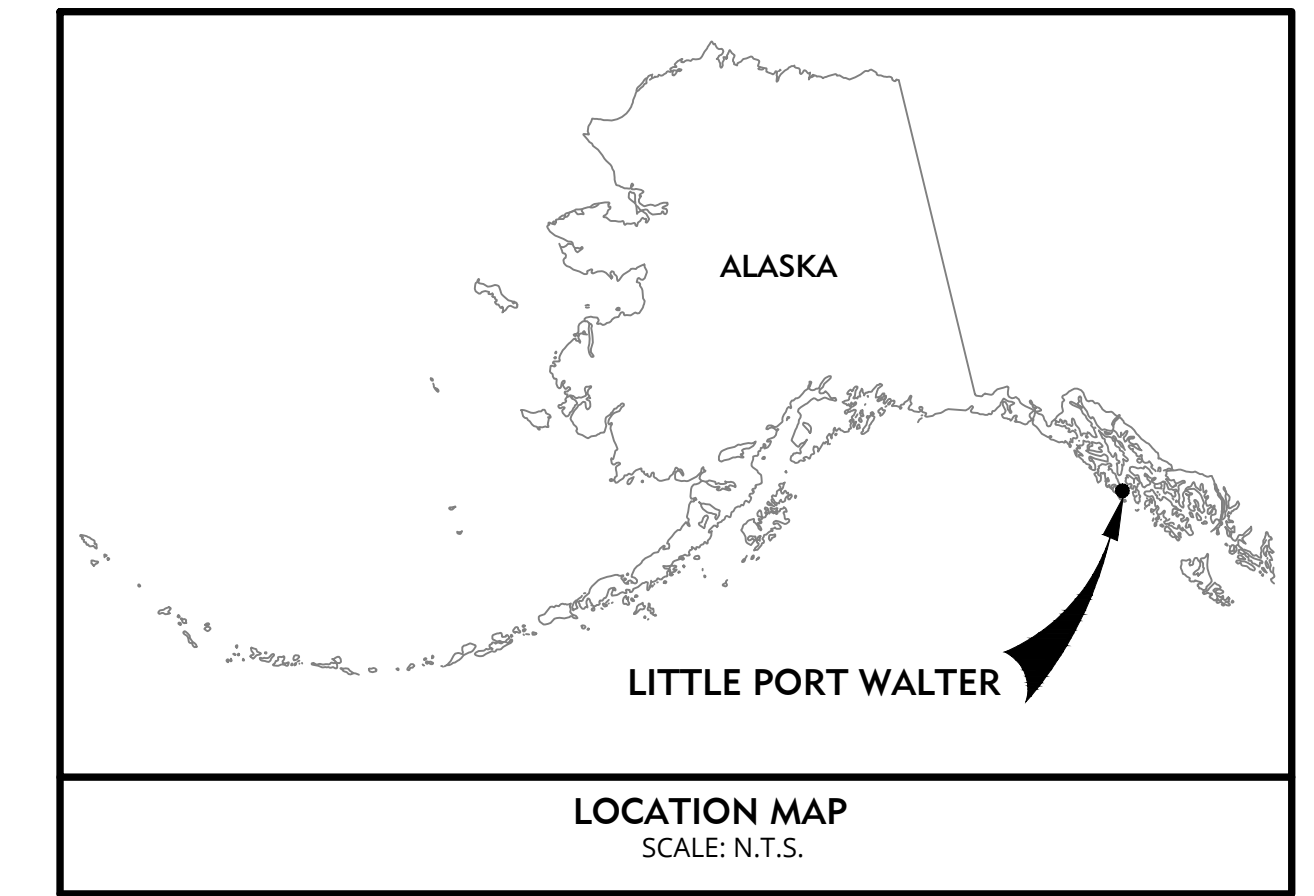
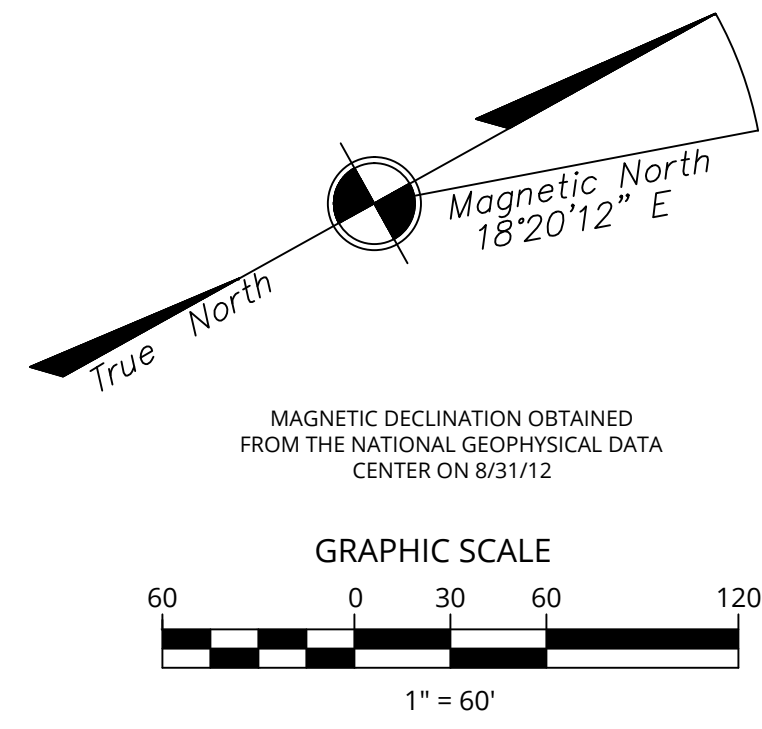
Figure 13. Workshop and generator shed area: Backfilled areas.

ATTACHMENT 2

NOAA FIGURE

LEGEND

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CONTROL POINT COORDINATE TABLE			
POINT	NORTHING	EASTING	DESCRIPTION
A	5731.4459'	10181.9428'	SET MAG IN PIER
B	5964.6067'	10432.7371'	SET MAG IN TRAIL
C	5937.3017'	10172.1878'	SET MAG
D	5558.4137'	9736.9766'	SET MAG IN BRIDGE
E	4925.6854'	9757.4945'	SET MAG
F	5934.3835'	10508.3065'	FD 1" ALCAP
G	5997.2975'	10338.5610'	SET MAG IN BRIDGE
H	5826.7833'	9941.5620'	HOLE IN CONCRETE
I	5379.7917'	9728.8890'	SET PK IN TRAIL
J	5886.2438'	10043.2753'	SET MAG
K	5248.3087'	9770.0822'	SET 6" SPIKE
L	5126.4882'	9792.9772'	SET 6" SPIKE
M	5023.0440'	9757.1377'	SET MAG IN ROOT
O	4818.5563'	9679.4731'	SET 6" SPIKE
P	4768.3684'	9615.8480'	SET SPIKE
Q	4682.8554'	9601.8902'	SET SPIKE
R	4563.7517'	9473.1620'	SET MAG IN DECK
S	4457.0929'	9518.5562'	SET MAG IN DECK
T	4429.9802'	9529.6706'	FD ALCAP 1.4' ABOVE GRADE
U	4580.3629'	9465.2418'	FD ALCAP GOOD CONDITION

- NOTES:**
- THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:5000.
 - ALL BEARINGS SHOWN ARE TRUE BEARINGS AS ORIENTED TO THE BASIS OF BEARINGS, AND THE DISTANCES SHOWN ARE REDUCED TO HORIZONTAL FIELD DISTANCES.
 - BURIED FUEL LINE LOCATIONS SHOWN ARE APPROXIMATE.

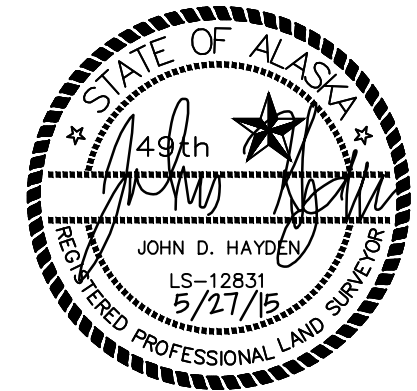
OVERALL SITE PLAN
SCALE: 1" = 60'

SURVEYORS CERTIFICATE

THIS SITE PLAN WAS PRODUCED UNDER MY DIRECT SUPERVISION WITH A LECIA 1205 ROBOTIC TOTAL STATION. THE MONUMENTS SHOWN HERE EXIST AS DESCRIBED. THE COORDINATES SHOWN ARE IN A LOCAL COORDINATE SYSTEM BASED ON MAGNETIC NORTH.

5/27/15
DATE

JOHN D. HAYDEN
REGISTERED LAND SURVEYOR



LITTLE PORT WALTER, ALASKA

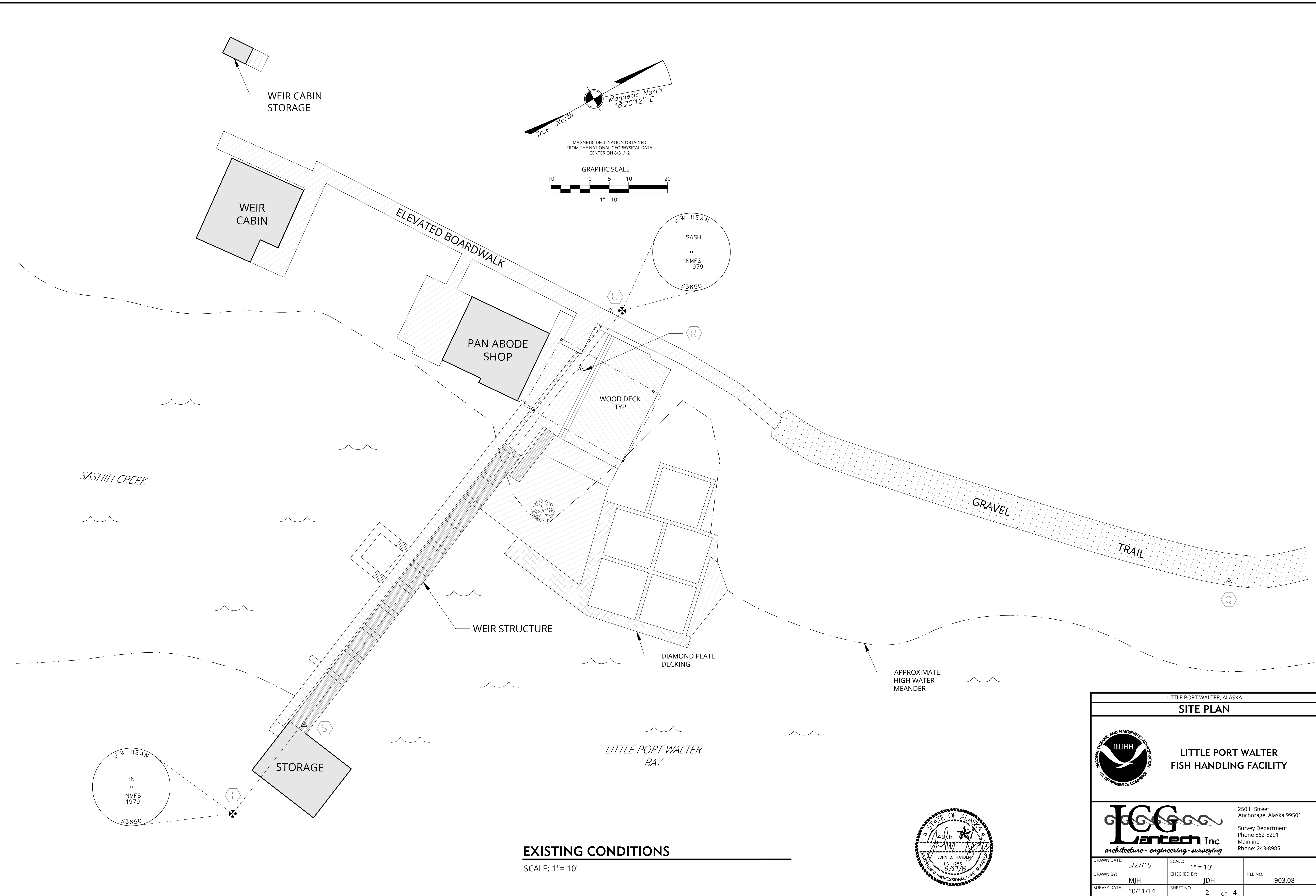
SITE PLAN

LITTLE PORT WALTER FISH HANDLING FACILITY

ICG
Lantech Inc
architecture · engineering · surveying

250 H Street
Anchorage, Alaska 99501
Survey Department
Phone 562-5291
Mainline
Phone: 243-8985



DRAWN DATE: 5/27/15	SCALE: 1" = 10'	FILE NO. 903.08
DRAWN BY: MJH	CHECKED BY: JDH	
SURVEY DATE: 10/11/14	SHEET NO. 1 OF 4	

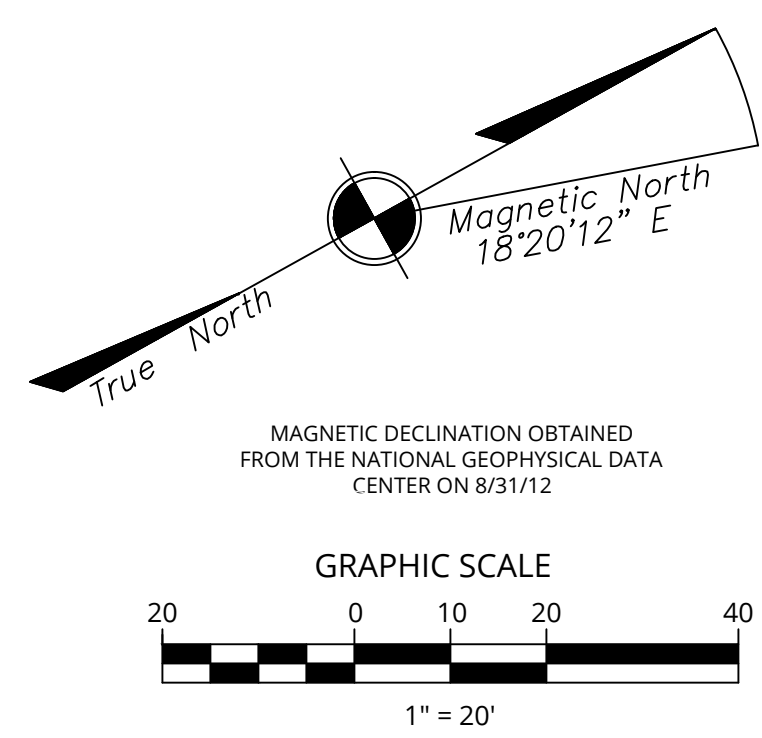
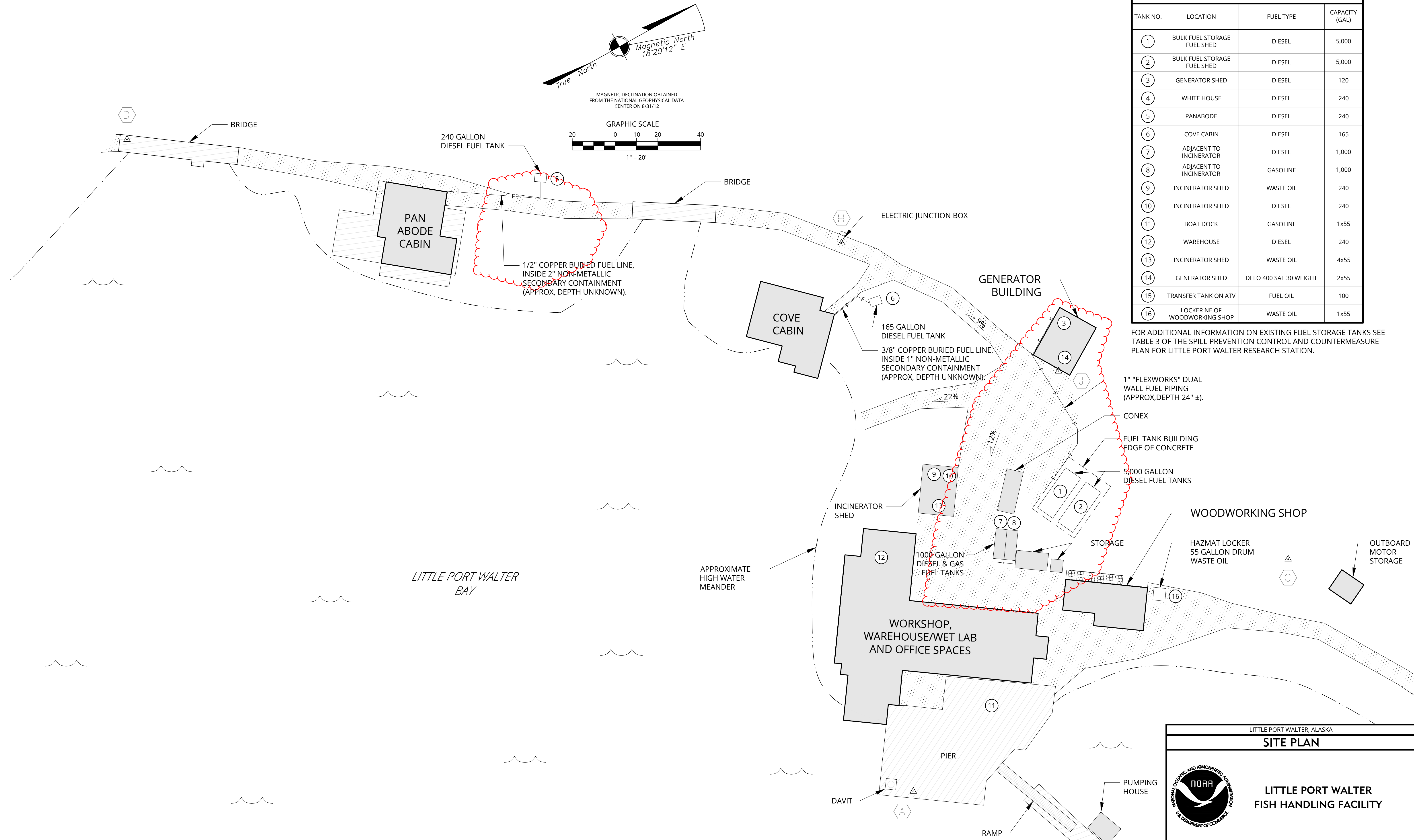


EXISTING CONDITIONS

SCALE: 1" = 10'



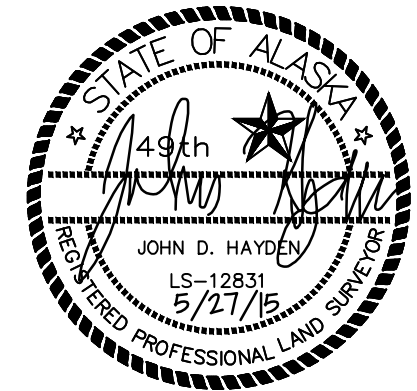
LITTLE PORT WALTER, ALASKA		
SITE PLAN		
		LITTLE PORT WALTER FISH HANDLING FACILITY
		250 H Street Anchorage, Alaska 99501 Survey Department Phone 562-5291 Mainline Phone: 243-8985
DRAWN DATE:	5/27/15	SCALE:
DRAWN BY:	MJH	CHECKED BY:
SURVEY DATE:	10/11/14	SHEET NO.:
		2 OF 4
		FILE NO. 903.08



FUEL TANK SUMMARY TABLE			
TANK NO.	LOCATION	FUEL TYPE	CAPACITY (GAL)
1	BULK FUEL STORAGE FUEL SHED	DIESEL	5,000
2	BULK FUEL STORAGE FUEL SHED	DIESEL	5,000
3	GENERATOR SHED	DIESEL	120
4	WHITE HOUSE	DIESEL	240
5	PANABODE	DIESEL	240
6	COVE CABIN	DIESEL	165
7	ADJACENT TO INCINERATOR	DIESEL	1,000
8	ADJACENT TO INCINERATOR	GASOLINE	1,000
9	INCINERATOR SHED	WASTE OIL	240
10	INCINERATOR SHED	DIESEL	240
11	BOAT DOCK	GASOLINE	1x55
12	WAREHOUSE	DIESEL	240
13	INCINERATOR SHED	WASTE OIL	4x55
14	GENERATOR SHED	DELO 400 SAE 30 WEIGHT	2x55
15	TRANSFER TANK ON ATV	FUEL OIL	100
16	LOCKER NE OF WOODWORKING SHOP	WASTE OIL	1x55

FOR ADDITIONAL INFORMATION ON EXISTING FUEL STORAGE TANKS SEE TABLE 3 OF THE SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN FOR LITTLE PORT WALTER RESEARCH STATION.

EXISTING CONDITIONS
SCALE: 1" = 20'



LITTLE PORT WALTER, ALASKA

SITE PLAN

LITTLE PORT WALTER FISH HANDLING FACILITY

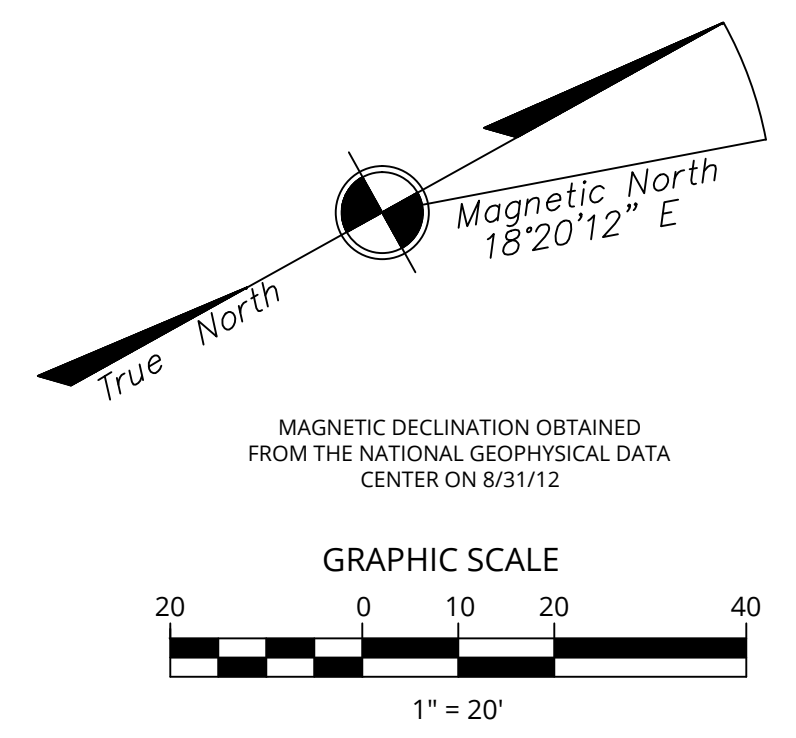
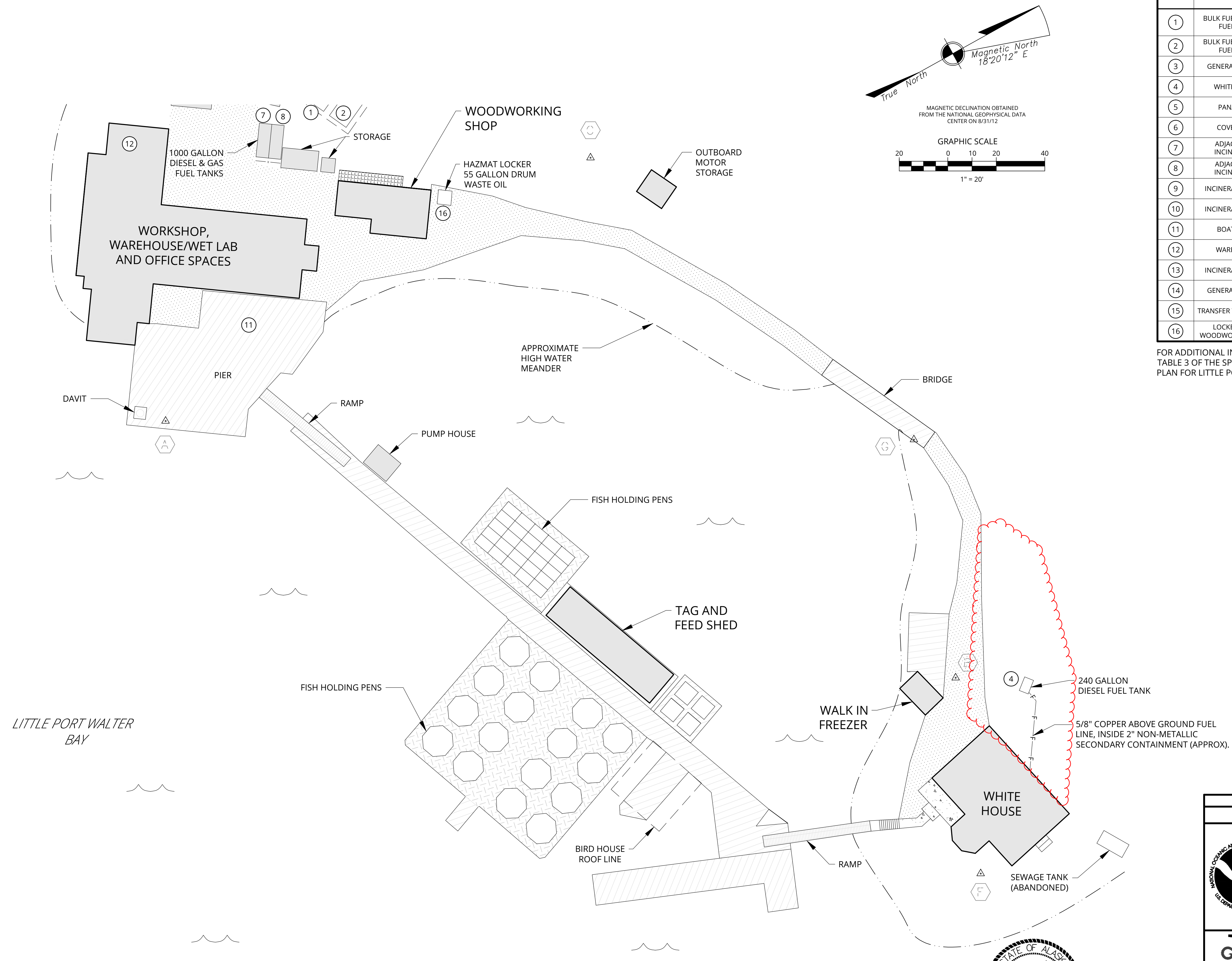
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DRAWN BY: MJH	CHECKED BY: JDH	FILE NO. 903.08
SURVEY DATE: 10/11/14	SHEET NO. 3	OF 4

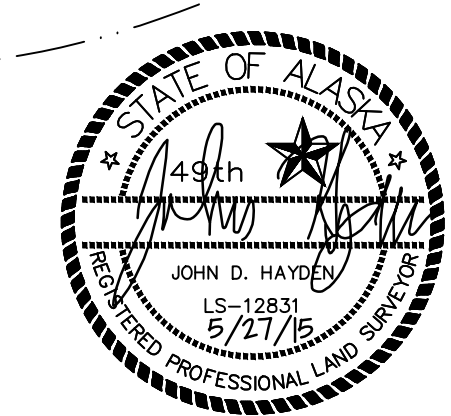
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FOR ADDITIONAL INFORMATION ON EXISTING FUEL STORAGE TANKS SEE TABLE 3 OF THE SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN FOR LITTLE PORT WALTER RESEARCH STATION.



EXISTING CONDITIONS

SCALE: 1" = 20'



LITTLE PORT WALTER, ALASKA

SITE PLAN

LITTLE PORT WALTER FISH HANDLING FACILITY

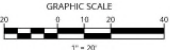
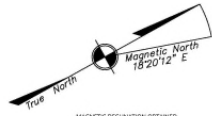
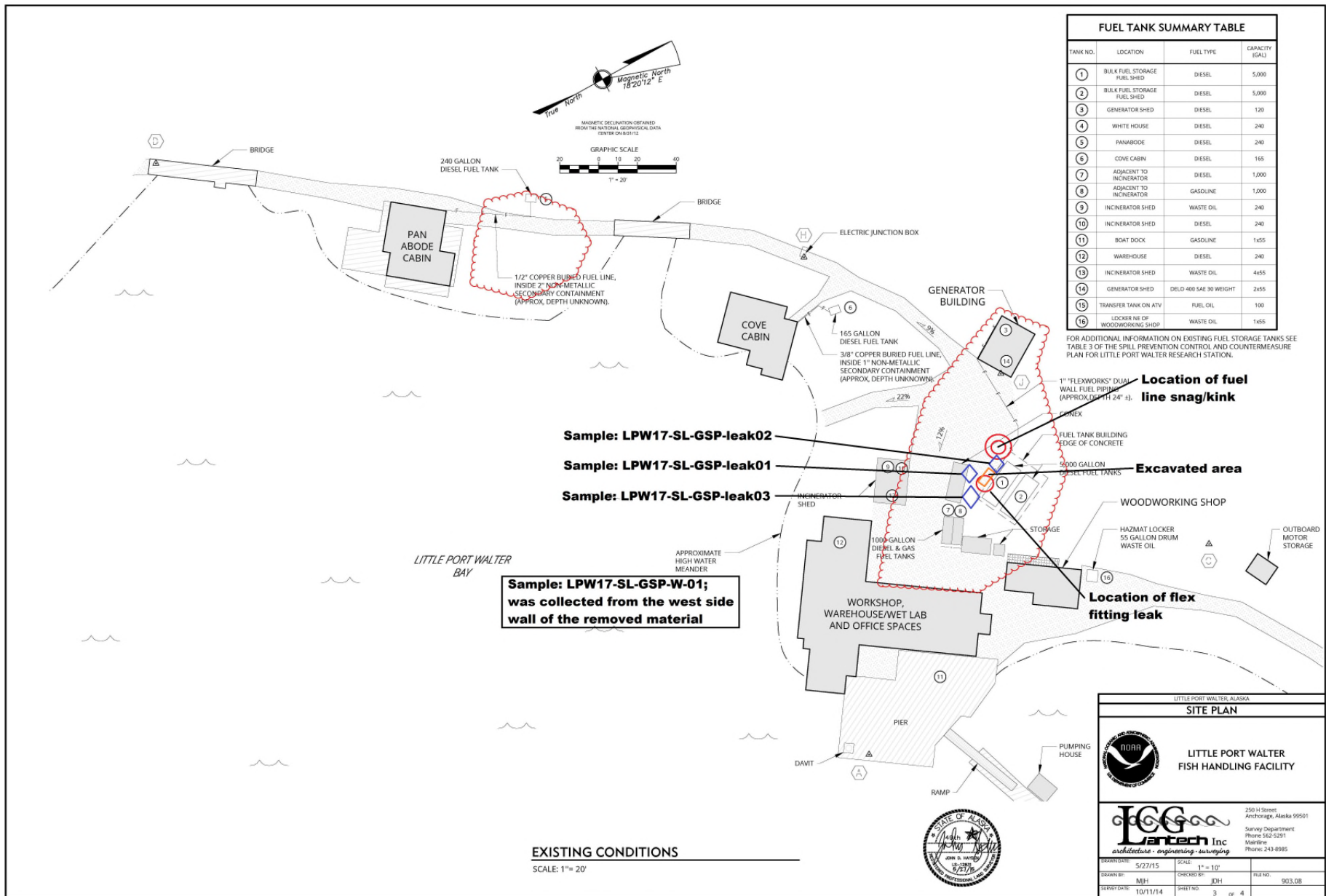
NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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ATTACHMENT 3
SAMPLE LOCATIONS



FOR ADDITIONAL INFORMATION ON EXISTING FUEL STORAGE TANKS SEE TABLE 3 OF THE SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN FOR LITTLE PORT WALTER RESEARCH STATION.

Sample: LPW17-SL-GSP-W-01;
was collected from the west side
wall of the removed material

EXISTING CONDITIONS
 SCALE: 1" = 20'

LITTLE PORT WALTER, ALASKA

SITE PLAN

LITTLE PORT WALTER FISH HANDLING FACILITY

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